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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,625	07/17/2003	Abtar Singh	4731-001COD	1854
27572	7590	04/21/2004	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C.			TANNER, HARRY B	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	

3744

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/621,625	SINGH ET AL.	
	Examiner	Art Unit	
	Harry B. Tanner	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 35-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/21/03 &amp; 1/07/04</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 38-41 and 46-52 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 38 and 46 recite the limitation that the control achieves the "highest possible suction pressure". It is not clear what this limitation means in the context of the claimed structure. It would appear that the "highest possible suction pressure" is achieved when the pressure regulator is opened 100% at all times. Since the claimed structure involves only an expansion valve control and an evaporator pressure regulator control, "highest possible suction pressure" does not have any clear restriction on the scope of the claimed invention since it is clear that the evaporator pressure regulator is not intended to be opened 100% at all times.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 35-44, 46-49 and 54-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Franaszek et al. Franaszek discloses a refrigeration system having an evaporator 140, an expansion valve 394 controlled in response to superheat and an evaporator pressure regulator 300 that controls the evaporator pressure measured by sensor 310 to control the temperature of the evaporator in response to the product

Art Unit: 3744

temperature using PID control (see col. 11, lines 14-46). It is inherent in the system of Franaszek that the evaporator pressure regulator 300 will control the suction pressure until it is substantially one hundred percent open.

Claims 53 and 57-59 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis. Lewis discloses an apparatus for a refrigeration system control that controls a rack of compressors and a plurality of electronic evaporator pressure regulators 44, 46 in response to temperature measurements within the plurality of refrigeration cases such that one electronic evaporator pressure regulator is operated in the fully open state and the compressor suction pressure is control in response to the lowest temperature set point in order to run the system at the highest possible suction pressure (see col. 5, line 60 to col. 6, line 20).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:


(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 45 and 50-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franaszek in view of Sukimoto et al. Franaszek is applied as in the rejection of claim 35 above. Sukimoto teaches the use of an average temperature measurement in order to control a temperature control device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system

Art Unit: 3744

of Franaszek such that it included the use of an average temperature measurement in order to a control the temperature of the product in view of the teachings of Sukimoto.

Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Sukimoto et al. Lewis is applied as in the rejection of claim 53 above. Sukimoto teaches the use of an average temperature measurement in order to control a temperature control device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Lewis such that it included the use of an average temperature measurement in order to a control the temperature of the product in view of the teachings of Sukimoto.



**Harry B. Tanner**  
Primary Examiner

Harry Tanner  
April 19, 2004  
703-308-2622